

BASINSKI, Antoni; SIEGOMA, Michalina; PILAT, Danuta

Studies on the mechanism of purification of silver halide
sols by means of ion-exchangers. Pt.5. Roczniki chemii 37 no.2:
201-206 '63.

1. Department of Physical Chemistry, Copernicus University,
Torun.

WAWRYK, Roman; SIERON Gerard.

Weight and length of newborn infants depending on occupations
of the mothers. Gin. polska 28 no.2:241-257 Mar-Apr 1956.

1. Z Kliniki Położnictwa i Chorób Kobietych A.M. w Zabrzu
Kierownik: prof. dr. W.Starszewski. Gliwice--Nowotki 46.

(INFANT, NEWBORN

length & weight, relation to maternal occupation (Pol))
(BODY WEIGHT, in infant and child,
birth weight, eff. of maternal occup. (Pol))
(BODY HEIGHT, in infant and child,
birth length, eff. of maternal occup. (Pol))

MUSIOLIK, Marian; GORNA, Maria; SIERON, Gerard

Results of examinations of women working in the coal industry.
Gin. polska 28 no.5:559-569 Sept-Oct 57.

1. Z Kliniki Położnictwa i Chorob Kobięcych Sl. A. M. w Zabrzu
Kierownik: doc. dr W. Starzewski i z Państwowego Instytutu Medycyny
Pracy w Przemysle Węglowym i Hutniczym w Zabrzu-Rokitnicy. Dyrektor:
prof. dr B. Nowakowski. Adres: Rybnik, ul. Tuwima 2.

(GYNECOLOGICAL DISEASES, statist.

in women workers in coal indust. in Poland (Pol))

GLOWINSKI, Mieczyslaw; LIMANSKI, Marian; SIERON, Gerard

Determination of Largactil in urine of puerperae and newborn infants by means of paper chromatography. Polski tygod.lek. 15 no 14:497-501 4 Apr '60.

1. Z I Kliniki Położnictwa i Chorob Kobietych Sl. A.M.; kierownik: prof.dr Wojciech Starzewski i z Wojewódzkiej Przychodni Immunopatologii Ciąży i Noworodka w Katowicach; kierownik: dr Marian Skorzynski.

(CHLORPROMAZINE urine)

(INFANT NEWBORN urine)

(PUERPERIUM urine)

STARZEWSKI, Wojciech; GLOWINSKI, Mieczyslaw; MUSIOLIK, Marian; SIERON,
Gerard; SMOK, Jan; WARONSKI, Wlodzimierz

Studies on blood coagulation in normal and pregnant subjects in
the Upper Silesia. Polski tygod.lek. 15 no.24:897-902 13 Je '60.

1. Z I Kliniki Poloznictwa i Chorob Kobietych Sl. A.M. w Zabrze,
kierownik: prof dr W. Starzewski.
(BLOOD COAGULATION)
(PREGNANCY blood)

STARZEWSKI, Wojciech; GLOWINSKI, Mieczyslaw; MUSIOLIK, Marian; SIERON,
Gerard; SMOK, Jan; WIRONSKI, Wlodzimierz

Blood coagulation during pregnancy, labor and puerperium. Communication I. Fibrinogen and fibrinolysis during pregnancy, labor and puerperium. Gin.polska 31 no.3:359-366 My-Je '60.

1. Z I Kliniki Poloznictwa i Chorob Kobietych Slaskiej A.M. w
Zabrze Kierownik: prof. dr W.Starzewski.

(PREGNANCY blood)

(LABOR blood)

(PUERPERIUM blood)

(FIBRINOGEN)

(FIBRINOLYSIS)

STARZEWSKI, Wojciech; GLOWINSKI, Mieczyslaw; MUSIOLIK, Marian; SIERON, Gerard;
SMOK, Jan; WARONSKI, Wlodzimierz

Blood coagulation in pregnancy, labor and puerperium. III. Pro-
thrombin and factor VII in pregnancy, labor and puerperium. Gyn.
polska 31 no.6:661-667 N-D '60.

1. Z I Kliniki Położnictwa i Chorob Kobietych Śląskiej AM. w Zabrze
Kierownik: prof. dr W. Starzewski.

(PREGNANCY blood) (LABOR blood)
(PUERPERIUM blood) (BLOOD COAGULATION)

STARZEWSKI, Wojciech; GLOWINSKI, Mieczyslaw; MUSIOLIK, Marian; SIERON, Gerard;
SMOK, Jan; WARONSKI, Wlodzimierz

Blood coagulation in pregnancy, labor and puerperium. IV. Factor V
in pregnancy, labor and puerperium. Gyn.polska 31 no.6:669-674
N-D '60.

1. Z I Kliniki Położnictwa i Chorob Kobietych Śląskiej AM w Zabrsu
Kierownik: prof. dr W. Starzewski.

(PREGNANCY blood)	(LABOR blood)
(PUERPERIUM blood)	(BLOOD COAGULATION)

SIERON, Gerard

Attempted regulation of the blood serum iron level with the
aid of phenactyl in cases of threatened abortion. Ginek.
pol. 34 no.5:583-588 '63.

1. Z I Kliniki Poloznictwa i Chorob Kobietych Sl. AM w
Zabrze. Kierownik: prof.dr.med. M.Glowinski

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SIEROŚLAWKA, J.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Biological Chemistry

②
Toxicity of pentothal. J. Sieroślowska (Acad. Med.)
Kraków). *Polska Akad. Umiejętności, Prace Komisji Nauk
Farm., Dissertationes Pharm.* 4, 1-31(1952).—Pentothal
anesthesia (in single or multiple doses) (1) caused a decrease
in blood glucose in rabbits, (2) did not affect the hypergly-
cemic curve after intravenous high-glucose feeding, (3)
accelerated the return to normal of the sugar curve after
intravenous infusion of galactose and adrenaline, (4) did not
affect the rate of disappearance of bromosulphthalein from
blood, (5) did not affect the blood nonalbumin protein
and chlorides, (6) caused an insignificant anemia with
lowering of hemoglobin content without affecting the white
cell picture, (7) did not affect the resistance of reticulocytes,
(8) had no effect on a hypotonic state, (9) did not cause sulf-
hemoglobinemia or methemoglobinemia, (10) caused hyper-
emia in liver, kidneys, spleen, and cardiac muscle without
degenerative or necrotic anatomical changes. Therefore
the toxicity of pentothal was found to be low in anesthetic
doses. 53 references. L. J. Piotrowski—

SIEFOSLAWSKA, J.

3

✓ Medicinal value of *Digitalis lanata*. M. Gatty-Kostyd and J. Siefoslawska (Prace Kom. Nauk. farmak. polsk. Inst., 1952, 4, 183-207). Studies of the medicinal properties of *Digitalis lanata* (cultivated in Poland) showed that the leaves of the plant (in form of powder or infusion) can be effectively used in heart diseases; their action is stronger and more rapid, but of shorter duration, than that of *Digitalis purpurea*. They produce no toxic symptoms, e.g., irritation of the digestive tract. Results from clinical tests were in good agreement with pharmacodynamic determinations. In medicinal prep., care must be taken to eliminate the harmful effects of the enzymes, alkali, and acids present in the leaves.

A. Szwed

SIEROŚLAWSKA 5

Investigations on tissue respiration in post-hemorrhagic hypotension. J. Sierośławska and J. Oszański. *Polski Tygodnik Lekarski* 7, 1628-30 (1952); *Excerpta Med.*, Sect. II, 7, 51 (1952).—Forty minutes after the loss of about $\frac{1}{4}$ of the circulating blood in the rat, the Q_{O_2} of hepatic, myocardial, and renal tissues increases in comparison with controls. Administration of pure O in the period of post-hemorrhagic hypotension inhibits the increase of Q_{O_2} in hepatic and myocardial tissues but does not influence that in renal tissue.

P. M. B.

SILBOSLANSKA, J.; OSZACKI, J.

Experimental studies of tissue respiration disorders during post-hemorrhagic decrease of blood pressure and of the effect of oxygen on these disorders. Polski tygod. lek. 7 no. 49:306*-312*; contd. 8 Dec 1953. (CMLL 24:2)

1. Of the Pharmacodynamics Laboratory (Head--Prof. J. Hano, M.D.) and of the Third Surgical Clinic (Head--Prof. J. Jasienski, M.D.). Krakow Medical Academy.

SIKROSLAWSKA, Janina; OSZACHI, Jan

Tissue respiration in tourniquet shock. Polski tygod.lek.
10 no.27:902-903 4 July '55.

1. Z Pracowni Farmakodynamiki A.M. w Krakowie; kierownik:
prof. dr J. Hane i z III Kliniki Chirurgicznej A.M. w Krakowie;
kierownik: prof. dr Jerzy Jasieński) Pracownia Farmakodynami-
czna Wdzyz. Farm.A.M. w Krakowie, ul. Grzegorzewska 16.

(SHOCK, experimental,
tissue resp. in tourniquet shock)

(METABOLISM, TISSUE,
in tourniquet shock)

SIEROSLAWSKA, Janina; OSZACKI, Jan.

Tissue respiration in cutaneous burns in rats. Polski tygod.lek.
10 no.44:1450-1451 31 Oct 55.

1. Z Pracowni Farmakodynamiki A.M. w Krakowie; kierownik: prof. dr.
J.Hano z III Kliniki Chirurgicznej A.M. w Krakowie; kierownik: prof.
dr. J.Jasienski. Pracownia Farmakodynamiczna Wydz. Farm. A.M. w
Krakowie, ul. Grzegorzewska 16.

(BURNS, experimental,

tissue resp. in)

(METABOLISM, TISSUE,

in resp. of tissue in exper. burns)

HANO, J., ~~SIEROSLAWSKA, J.~~

Investigations on biological action of Adonis vernalis L. Acta
Poloniae pharm. 11 Suppl.:70-72 1955.

1. Pracownia Farmakodynamiki A.M., Krakow.
(ADONIS,
vernalıs, biol. action)

Sieroslawski, J.

med

Pharmacological activity of *Adonis vernalis* cultivated in Poland. Jacek Hano and Janina Sieroslawski (Med. Acad. Kraków, Poland). *Dischidionis Pharm.* 8, 37-46 (1956) (English summary).—*A. vernalis* growing wild in Poland has an av. toxicity of 33 cat units and 11.5 pigeon units/g of dry pulverized herb. The imported drug had a much lower biological activity (14-17.5 cat units). The activity stays constant during the first 2 years of normal storage, decreases 10% during the 3rd year, and 20% during the 4th year. It is recommended that 20 cat or 10 pigeon units in 1 g. of dry pulverized drug be considered as the pharmacopetal norm and that the native herb, renewed every 3 years, be used as a temporary standard. *A. vernalis* is becoming a rare plant in Poland and is at present protected. The authors recommend that plantations be started in districts which seem to possess the required climatic conditions.

Alina S. Sieroslawski

OSZACKI, Jan; SIEROSLAWSKA, Janina

Effect of injury on oxygen intake by tissue. Polski
przegl. chir. 28 no.5:451-453 May 56.

1. Z Pracowni Farmakodynamiki A.M. w Krakowie. Kierownik:
prof. dr. J. Hano i z II Kliniki Chirurgicznej A.M. w Krakowie
Kierownik: prof. dr. K. Michejda Krakow, ul. Kopernika 21.

(METABOLISM,

oxygen consumption, eff. of exper. inj. (Pol))

(WOUNDS AND INJURIES, experimental,

eff. on oxygen consumption (Pol))

STERCIAŁA-SKA, Janina

Pharmacological properties of gamma-aminobutyric acid (GABA)
and its derivatives. Post. hig. med. dosw. 18 no.3:113-162
1964

1. Z Zakładu Farmakodynamiki Akademii Medycznej w Krakowie
(Kierownik: prof. dr. J. Hano).

SIEROSLAWSKA, Janina

Pharmacologic properties of γ -aminobutyric acid and its derivatives.
II. Effect on the central and peripheral nervous system. Arch.
immun. ther. exp. 13 no.1:70-126 '65

1. Department of Pharmacodynamics, School of Medicine, Cracow.

SIEROSLAWSKA, Teodorzja

Electrophoretic picture of blood serum proteins after therapy with typhoid vaccine. Klin.ocsna 30 no.2:163-165 '60.

1. Z Kliniki Ocznej A.M. we Wroclawiu. Kierownik: prof.dr med.
W.J. Kapuscinski.

(BLOOD PROTEINS)
(TYPHOID immunol.)
(VACCINATION)
(EYE dis.)

SIEROSLAWSKA, Teodozja

A case of carcinoma planocellulare of the conjunctiva and cornea.
Klin.oczna 30 no.3;283-286 '60.

1. Z Kliniki Ocznej A.M. we Wroclawiu. Kierownik: prof. dr med.
W.M.Kapuscinski.
(EYE neopl)
(CARCINOMA casereports)

KAPUSCINSKI, Witold J.; MEJBAUM-KATZENELLENBOGEN, Wanda; SIEROSLAWSKA, Teodozja

Paper electrophoresis of proteins in the aqueous humor in experimental uveitis in the rabbit. *Klin. oczna* 31 no.4:325-330 '61.

1. Z Kliniki Ocznej AM we Wrocławiu Kierownik: prof. dr med. W. J. Kapuscinski Z Zakładu Chemii Fizjologicznej AM we Wrocławiu Kierownik: prof. dr W. Mejbaum-Katzenellenbogen.

(UVEITIS exper) (PROTEINS metab)
(AQUEOUS HUMOR metab) (ELECTROPHORESIS)

SIEROSLAWSKA, Teodozja

On electrophoresis of the lens. Klin. oczna 32 no.2:105-110 '62.

1. Z Kliniki Chorob Oczu AM we Wroclawiu Kierownik: prof. dr med.
W. J. Kapuscinski.

(LENS CRYSTALLINE chem) (ELECTROPHORESIS)
PROTEINS chem)

SIEROSLAWSKA, Teodozja; BRODZIAK, Kazimiera

Influence of chymotrypsin on adhesion of the front part of the choroid.
Klin. oczna 32 no.3:215-219 '62.

1. Z Kliniki Chorob Oczu AM we Wroclawiu Kierownik: prof. dr med.
W. Kapuscinski.
(CHYMOTRYPSIN) (CHOROID) (SCLERA)

1. The first part of the document is devoted to the analysis of the situation in the country.

The second part of the document is devoted to the analysis of the situation in the country.

1. The first part of the document is devoted to the analysis of the situation in the country.

SIEROSZEWSKI, Jozef; SAKOWSKI, Jan; MALNWSKI, Konrad

Treatment of thrombosis of the lower extremities by drip transfusion of the blood or plasma. Polski tygod. lek. 9 no.38:1236-1237 20 Sept 54.

1. Z Kliniki Poloznictwa i Chorob Kobietych A.M. w Lodzi, kierownik: prof. dr med. J.Sieroszewski.

(BLOOD TRANSFUSION, in various diseases,
thrombosis of leg, drip transfusion)

(THROMBOSIS,
leg, ther., drip blood transfusion)

(LEG, BLOOD SUPPLY,
thrombosis, ther., drip blood transfusion)

SIEROSZEWSKI, Józef.

Prof. Dr Wilhelm Włodzimierz Sowiński: Gin. polska 27 no.1:
1-6 1956.

(OBITUARIES,

Sowiński, Wilhelm W.)

(BIOGRAPHIES,

Sowiński, Wilhelm W., bibliog.)

SIEROSZEWSKI, Józef.

Precancerous conditions of the uterus. Gin. polska 27 no.1:
99-109 1956.

1. Z I Kliniki Chorob Kobietych i Położnictwa A.M. w Łodzi
Kierownik: prof. dr J.Sieroszewski. Łódź, Moniuszki 1.
(UTERUS, neoplasms,
precancer (Pol))

KOMOROWSKA, Alina; LINIECHA, Janina; SIEROSZEWSKI, Josef

Gynecological dispensary for children. Gin. polska 28 no.5:
571-578 Sept-Oct '6.

1. Z Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi
Kierownik: prof. dr. med. J. Sieroszewski, A. Komorowska,
Łódź, Plac Dąbrowskiego 2.

(CLINICS,

pediatric gyn., organiz. & work in Poland (Pol))

(GYNECOLOGICAL DISEASES, in infant and child

clinics, organiz. & work in Poland (Pol))

(PEDIATRIC DISEASES

gyn., clinics, organiz. & work in Poland (Pol))

SIEROSZEWSKI, Josef (Lodz, Piotrkowska 203 m. 5.)

Surgery of vesicovaginal & rectovaginal fistulae using a modified
Sposokukocki technic. Gin. polska 29 no.2:195-200 Mar-Apr 58.

1. Z I Kliniki Poloznictwa i Chorob Kobietych A. M. w Lodzi Kierownik:
prof. dr med. J. Sieroszewski.

(FISTULA, VESICOVAGINAL, surg.
technic (Pol))

(VAGINA, fistula
rectovaginal, surg. technic (Pol))

(RECTUM, fistula
same)

SIEROSZEWSKI, Jozef; LAUDYNSKA, Estella; NOWICKI, Zbigniew

Surgical therapy of inflammatory conditions of the adnexa
uteri. Gin.polski. 30 no.6:713-727 M-D '59.

1. Z I Kliniki Położnictwa i Chorob Kobiectych A.M. w Łodzi
Kierownik: prof. dr J. Sieroszewski.
(ADNEXITIS surg)

SIEROSZEWSKI, J.; PAJSZEZYK, L.; KESZKIEWICZ, E.

On the incidence of shock in relation to the course of pregnancy
and labor. Akush.i gin. 36 no.1:42-45 Ja-P '60.

(MIRA 13:10)

(PREGNANCY, COMPLICATIONS OF) (SHOCK)
(LABOR, COMPLICATED)

SIEROSZEWSKI, Josef; KUCIŃSKI, Janusz; NOWICKI, Zbigniew; PAJSZCZYK-KIESZKIEWICZ,
Teresa; WOŁODZKO, Leon

Heart defects from the obstetric viewpoint. Gyn. polska 32 no.2:135-144
'61.

1. Z I Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi Kierow-
nik: prof. dr J. Sieroszewski
(HEART DISEASE in pregn)
(PREGNANCY compl)

SIEROSZEWSKI, Josef; LUDANSKA, Estella; SAKOWSKI, Jan; KROLIKOWSKA, Maria;
NOWICKI, Zbigniew; LACHOWICZ, Lilla

Selected hemodynamic problems in 3d stage of labor. Gin. polska 32
no.2:177-184 '61.

1. Z I Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi Kierownik:
prof. dr J. Sieroszewski
(LABOR. blood)

SIEROSZEWSKI, Jozef; LAUDANSKA, Estella; SAKOWSKI, Jan; KROLIKOWSKA, Maria;
NOWICKI, Zbigniew

Hemorrhage in 3d stage of labor. Gin. polska 32 no.2:185-190 '61.

1. Z I Kliniki Położnictwa i Chorob Kobięcych A.M. w Łodzi Kierow-
nik: prof. dr J. Sieroszewski
(HEMORRHAGE POSTPARTUM)

SIEROSZEWSKI, Jozef; LAUDANSKA, Estella; SAKOWSKI, Jan; KROLIKOWSKA, Maria
NOWICKI, Zbigniew

Pharmacological management of 3d stage of labor. Gin. polska 32
no.2:197-201 '61.

1. Z I Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi Kie-
rownik: prof. dr J. Sieroszewski
(HEMORRHAGE POSTPARTUM prev & control)

SIEROSZEWSKI, Jozef; PAJSZCZYK, Teresa; KIESZKIEWICZ, Jerzy

Shock in obstetrics (according to clinical data in the period of
1955-1959. Gin. polska 32 no.2:203-214 '61.

1. Z I Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi Kie-
rownik: prof. dr J. Sieroszewski
(SHOCK in pregn)
(PREGNANCY compl)
(LABOR compl)

SIEROSZEWSKI, Jozef; SAKOWSKI, Jan

Author's own method in the treatment of thrombotic conditions of the lower extremities. II. Gin. polska 32 no.2:265-275 '61.

1. Z I Kliniki Położnictwa i Chorob Kobiectych A.M. w Łodzi Kierownik:
prof. dr J. Sieroszewski
(THROMBOEMBOLISM ther)

SIEROSZEWSKI, Josef, LAUDANSKA, Estella

Aldridge-Meredith method for total abdominal hysterectomy. Gin. polska
32 no.2:276-280 '6..

1. Z I Kliniki Położnictwa i Chorob Kobięcych A.M. w Łodzi Kierownik:
prof. dr J. Sieroszewski
(HYSTERECTOMY)

SIEROSZEWSKI, Jozef; SAKOWSKI, Jan

Gynecological operations (1958-59). Gin. polska 32 no.2:281-290 '61.

1. Z I Kliniki Położnictwa i Chorob Kobietych A.M. w Łodzi Kierownik:
prof. dr J. Sieroszewski
(GENITALIA FEMALE surg)

SIEROSZEWSKI, Jozef; KOMOROWSKA, Alina; KURNATOWSKA, Alicja; LINIECKA, Janina

Fungal infections of the vulva and vagin in young girls. Gin. polska
32 no.4:491-502 '61.

1. Z I Kliniki Położnictwa i Chorob Kobietych AM w Łodzi Kierownik:
prof. dr J. Sieroszewski Z Zakładu Biologii i Parazytologii Lekar-
skiej AM w Łodzi Kierownik: doc. dr R. Kadłubowski
(VULVA dis)
(VAGINA dis)
(MYCOSIS in inf & child)

GIESLINSKI, Stanislaw; LENKO, Jan; SIEROSZEWSKI, Jozef

A case of vesicovaginal fistula. Gin. polska 32 no.5:573-576 '61.

1. Z Kliniki Urologicznej Wojskowej AM w Lodzi Kierownik: doc. dr
J.Lenko i z Kliniki Chorob Kobietych i Poloznictwa Wojskowej AM w
Lodzi Kierownik: prof. dr J.Sieroszewski.
(VESICOVAGINAL FISTULA case reports)

PAWLIKOWSKI, Tadeusz; SIEROSZEWSKI, Jozef; BOJANOWICZ, Kazimierz;
RETORSKI, Zdzislaw

A case of true hermaphroditism with unusual formation of
the urogenital system. Endokr. pol. 14 no.4:317-327 '63.

1. I Klinika Chorob Wewnętrznych A.M. w Łodzi Kierownik: prof.
dr J.W. Grott Zakład Endokrynologii A.M. w Łodzi Kierownik:
prof. dr T. Pawlikowski I Klinika Położnictwa i Chorob Kobietych
A.M. w Łodzi Kierownik: prof. dr J. Sieroszewski.
(HERMAPHRODITISM)

SIEROSZEWSKI, Jozef; LAUDANSKA, Estella; MAZUREK, Ludwik; TERLECKA, Helena,
GWOZDZ, Antoni; WISNIOWSKA, Alicja.

Urological changes following extensive gynecological surgery.
Pol. przegl. chir. 36 no.2:177-184 F'64

1. Z I Kliniki Chorob Kobietych AM w Lodzi (kierownik: prof.dr.
J.Sieroszewski) i z Oddzialu Urologicznego (kierownik: doc. dr.
L. Mazurek) i I Kliniki Chirurgicznej AM w Lodzi (kierownik:
prof.dr. M.Stefanowski).

GAERTNER, Henryk; LISIEWICZ, Jerzy; ~~STEFANOWSKI~~ STANISLAWSKI, Hubert; SZIRMAI, Endre

The inactivation of thrombin by normal human urine. Pol. tyd. lek.
18 no.3:84-86 14 Jan '63.

1. Z Pracowni Hemostatycznej; kierownik: dr H. Gaertner, III Kliniki
Chorob Wewnętrznych AM w Krakowie; kierownik: prof. dr J. Aleksandrowicz.
(THROMBIN) (URINE) (HYDROGEN ION CONCENTRATION)

SIEROTWINSKI

SIEROTWINSKI, S.

Seweryn Goszczynski' Dziennik Podrozy do Tatrow (Diary from a Journey to the Tatra Mountains): a book review.

P. 177 (Wierchy) Vol. 25, 1956, Krakow, Poland.

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

SIEROTWINSKI, S.

Did Goszczynski reach Ornak?

p. 264 (Wierchy) Vol. 25, 1956, Krakow, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

WISNIEWSKI, Leonard

Utilization of the production capacity in the cable industry.
Problemy prof hut maszyn 10 no.9:228-232 1963

1. Frozemet, Gdansk.

MANICKI, Jerzy; SIERPINSKI, Maciej; STANKIEWICZ, Lech

Effect of stimulation of the vagus nerve on nitrogen balance
in dogs. Polski tygod.lek. 10 no.24:811-812 13 June '55.

1. Z II Kliniki Chirurgicznej A.M. w Warszawie; kierownik:
prof.dr med.Jan Mossakowski) Jablonna, k. Warszawy, ul.
Modlinska 63.

(NERVES, VAGUS, physiology.

eff. of stimulation on nitrogen balance in dogs)

(NITROGEN, metabolism,

eff. of vagus stimulation in dogs)

MANICKI, Jerzy; SIERPINSKI, Maciej; STANKIEWICZ, Lech; RESZKE, Halina;
ZIEHKEWICZ, Konrad.

The effect of high-fat diet on protein absorption in patients with
esophageal strictures. Polski tygod. lek. 11 no.2:49-5; 9 Jan 56.

1. Z II Kliniki Chirurgicznej A.M. w Warszawie: kier: Kliniki:
prof. dr. med. Jan Mossakowski. Jablonna k. Warszawy, ul.
Modlińska 63.

(ESOPHAGUS, stenosis

protein metab. in, eff. of high-fat diet)

(PROTEIN, metab.

in stenosis of esophagus, eff. of high-fat diet)

(DIETS

high-fat, eff. on protein metab. in esophageal stenosis)

(FATS, eff.

high-fat diet, eff. on protein metab. in esophageal stenosis)

SIERPINSKI, Maciej

Sarcoma of the gall bladder. Pol. przegl. chir. 34 no.10:1015-1017
'62.

1. Z II Kliniki Chirurgicznej AM w Warszawie Kierownik: doc. dr
Z. Lapinski.

(SARCOMA)

(GALLBLADDER)

SIERPINSKI, Maciej

Abscess of the liver as a complication of amebiasis. Pol.
tyg. lek. 18 no.26:951-952 Je '63.

1. Z II Kliniki Chirurgicznej AM w Warszawie; kierownik
Kliniki: doc. dr med. Z. Lapinski.

(LIVER ABSCESS, AMEBIC) (DIIDOHYDROXYQUIN)
(IODOCHLOROHYDROXYQUIN) (COLITIS, ULCERATIVE)
(EMETINE) (CHLORTETRACYCLINE) (CHLOROQUINE)

GRABOWSKI, Stefan; SIERPINSKI, Maciej

Our experience with the treatment of surgical wounds with the use of Redon-Yost's hypotension. Pol. tyg. lek. 19 no.32:1236-1237 10 Ag '64.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Warszawie (kier.: doc. dr med. Zdzisław Lapinski).

ENCYCLOPEDIA MEDICA Sec 9 Vol 13/8 Surgery August 59

4426. MONDOR'S DISEASE - Choroba Mondora - Sierpiński M. II. Klin.
Chir., Warszawa - POL. PRZEGL. CHIR. 1958, 30/8 (863-865)

Thrombotic thoraco-epigastric phlebitis, described for the first time by Mondor, occurs fairly often and because it is not widely known, it is sometimes erroneously diagnosed (it is often ascribed to a neoplastic origin). This disease usually clears up spontaneously after 2-3 months; its aetiology is unknown. Only symptomatic treatment is required. Recurrences have not been noted.

SERPINSKI, S.

GAPTEK, Ya.; KOZNEVSKAYA, G.; SMLITSKIY, B.; SERPINSKIY, S.; STIMPEN', L.;

TOCHEN, S.

Investigations on the pathophysiological mechanisms of speech disorders in focal affections of the dominant hemisphere of the brain. Zhur. nevr. i psikh. 55 no. 12:922-927 '55. (MLRA 9:2)

1. Otdel neyrokhirurgii Gosudarstvennogo psikhonevrologicheskogo instituta (dis.-prof. Z. Kuligovskiy) Varshava.

(SPEECH, DISORDERS, etiology and pathogenesis,
brain lesions of dominant hemisphere)

(BRAIN, diseases,
lesions of dominant hemisphere causing speech disord)

STEPIEN, Lucjan; SIERPINSKI, Stanislaw

Effect of focal lesions of the brain on recent visual and auditory memory in men. Rozpr.wyds.nauk med. 6 no.2:203-226 '61.

1. Z Zakladu Neurochirurgii Polskiej Akademii Nauk Kierownik: prof. dr med. L. Stepień.

(BRAIN wds & inj) (MEMORY) (VISUAL PERCEPTION)
(HEARING)

SIERPINSKI, Stanislaw; TOCZEK, Stanislaw

Anomalous course of posterior inferior cerebellar arteries as a cause of the clinical picture simulating syndrome of posterior cranial fossa tumor. ~~Neurologia~~ etc. polska 11 no.6:757-766 '61.

1. Z Kliniki Neurochirurgii AM w Warszawie Kierownik: prof. dr med.
J. Chorobski.
(CEREBELLUM blood supply) (BRAIN NEOPLASMS diag)

GRUSZKIEWICZ, J.; MAZUROWSKI, W.; SIERPINSKI, S.; SWITKA, S.

An unusual case of a foreign body in the lateral cerebral ventricle.
Neurol. neurochir. psychiat. pol. 12 no.1:135-137 '62.

1. Z Kliniki Neurochirurgicznej AM w Warszawie Kierownik: prof. dr
J. Chorobski i z III Kliniki Chirurgicznej AM w Warszawie Kierownik:
prof. dr J. Raczyński.

(CEREBRAL VENTRICLES for body)

GRUSZKIEWICZ, J.; MAZUROWSKI, W.; SIERPINSKI, S.; SWITKA, A.

A case of a peculiar foreign body in the lateral ventricle of the brain. Neurol neurochir psych 12 no.1:135-137 Ja- F '62.

1. Klinika Neurochirurgiczna, Akademia Medyczna, Warszawa; Kierownik: prof. dr J. Chorobski; i III Klinika Chirurgiczna, Akademia Medyczna, Warszawa; Kierownik; prof. dr J. Raczynski.

STEFAN PINSKI, WARCZAW

Stefan Pinski, Wacław. Sur le paradoxe de la sphère. Fund. Math. 33, 235-244 (1945). [MF 16876]

Let us say that 2 subsets A and B of Euclidean 3-space E_3 are n -equivalent by decomposition if they are respectively expressible as the sum of n (mutually) disjoint subsets $A_i, B_i, i=1, \dots, n$; $A = \sum_{i=1}^n A_i, B = \sum_{i=1}^n B_i$ (i.e., $A_i A_j = B_i B_j = 0$ for all $i \neq j$), such that A_i is congruent to $B_i, i=1, \dots, n$. The author proves the theorem: every sphere S of E_3 is the sum of 2^k disjoint subsets of which each is n -equivalent to S with $n=9$. The proof utilizes a result of Hausdorff and an idea of J. von Neumann and connects with his assertive results of Hausdorff, Banach and Tarski, von Neumann, and the author.

H. Blumberg (Columbus, Ohio).

Source: Mathematical Reviews,

Vol 8, No. 3

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SIERPINSKI, WACLAW

Math
Sierpinski, Wacław

Sur la non-invariance topologique de la propriété λ . Fund. Math. 33, 264-268 (1945).

L'auteur étudie les relations entre diverses propriétés des ensembles linéaires: propriété λ de C. Kuratowski [Fund. Math. 21, 127-128 (1933)], propriété λ' définie par l'auteur [C. R. Soc. Sci. Lett. Varsovie 30, 257-259 (1937)], et ensemble concentré de A. S. Besicovitch [Acta Math. 62, 289-300 (1934)]. Un ensemble E est dit jouir de la propriété λ si pour tout dénombrable D contenu dans E il existe un G_1 contenant D et dont l'intersection avec E se réduit à D . La propriété λ' se définit en supprimant dans l'énoncé de λ "contenu dans E ." Un ensemble E est dit concentré s'il existe un dénombrable D tel que tout ouvert contenant D contient E à un dénombrable près.

L'auteur établit d'abord que λ' équivaut à la condition de ne contenir aucune partie non dénombrable concentrée. Il démontre ensuite que, contrairement à λ , la propriété λ' ne se conserve pas par une homéomorphie sur E . Il utilise pour cela le résultat suivant de F. Rothberger, énoncé sans référence. Il existe un ensemble concentré H formé de nombres irrationnels qu'on peut appliquer d'une manière biunivoque et continue sur un intervalle fermé. Les démonstrations font appel à l'hypothèse du continu. En terminant, l'auteur introduit la propriété λ' relative au plan et la relie à la précédente.

R. de Possel (Alger).

Source: Mathematical Reviews,

Vol 8, No. 3

SIERPINSKI, WACLAW On the Topological Non-Invariant Property of Property λ

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SIERPIŃSKI, WACŁAW

Sierpiński, Wacław. Sur deux conséquences d'un théorème
de Hausdorff. Fund. Math. 33, 269-272 (1945).

[MF 16877]

Without the hypothesis of the continuum, F. Hausdorff demonstrated that the line is a sum of a transfinite series of type Ω of actually increasing G_δ sets. Using this theorem, Sierpiński shows that: (1) there is a linear set E such that D linear and denumerable implies D is a G_δ relative to $E + D$; (2) there is a decomposition of the line into nonempty disjoint F_σ sets. Both results were previously known under the hypothesis of the continuum. There is a discussion of the relation of these results to others and it is pointed out that it is still not known whether, without the hypothesis of the continuum, F_σ can be replaced in statement (2) by G_δ .

J. F. Randolph (Oberlin, Ohio). *SMW*

Source: Mathematical Reviews,

Vol 8, No. 3

SIERPINSKI, WACLAW

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*Sierpinski, Wacław. Zasady Algebry Wyzszej. [Principles of Higher Algebra]. With an appendix by Andrzej Mostowski: Outline of Galois Theory. Monografie Matematyczne, vol. 11. Warszawa-Wrocław, 1946. xii+437 pp. (Polish)

This textbook covers in a very thorough but elementary way the basic facts of classical algebra, leading up and into modern algebra. It stops short of ideal theory. The list of chapter headings with brief comments in parentheses should give an idea of the scope of the book. (I) Permutations, (II) Determinants, (III) Solution of linear equations, (IV) Linear transformations, (V) Matrices, (VI) Complex numbers, (VII) Proof of the fundamental theorem of algebra, (VIII) Polynomials (arithmetic of polynomials in the complex domain, interpolation formulae, decomposition of rational functions into simple fractions), (IX) Symmetric polynomials, (X) Equations of the 2d, 3d, and 4th degree,

(XI) Equations of the division of the circle (roots of unity), (XII) Algebraic numbers (in the field of complex numbers), (XIII) Number fields (in the complex domain), (XIV) Impossibility proofs (trisection and similar topics), (XV) Systems of two algebraic equations, (XVI) Calculation of roots of algebraic equations (Sturm's and Newton's methods), (XVII) General theory of operations (abstract theory of binary operations), (XVIII) Substitutions, (XIX) Groups, (XX) Generalization of number fields (abstract fields).

The appendix by Mostowski gives a lucid and elementary account of Galois theory. The definition of the Galois group (separable case) is by means of substitutions on the roots of a polynomial. The fundamental theorem of Galois theory and its application to the solution of equations are treated.

S. Eilenberg (New York, N. Y.)

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Source: Mathematical Reviews,

Vol

No.

SIERPINSKI, W

(Sierpiński, W. Sur un problème de triades. C. R. Soc. Ser. Varsovie 33-38, 13-16 (1946). (French. Polish summary)

A set E is said to have the property of Steiner if there exists a family \mathcal{F} of three-element subsets of E such that any two-element subset of E lies in exactly one set of the family \mathcal{F} . It is known that a finite set has the property of Steiner if and only if its cardinality is of the form $6k+1$ or $6k+3$. [See E. Netto, *Lehrbuch der Combinatorik*, 2d ed., Teubner, Leipzig, 1927, pp. 202-218.] The author proves by using the axiom of choice that every infinite set has the property of Steiner. W. Gustin (Bloomington, Ind.).

Source: Mathematical Reviews,

Vol. 6 No. 10

Sierpinski, Waclaw

Math

Sierpiński, Waclaw. Sur une suite infinie de fonctions continues dont toute fonction d'accumulation est non mesurable. Acad. Serbe Sci. Publ. Inst. Math. 1, 5-10 (1947).

A function f is called an accumulation function of a sequence $f_k, k=1, 2, \dots$, if for each $\epsilon > 0$ and each finite system x_1, x_2, \dots, x_m , there are an infinity of indices such that $|f_k(x_i) - f(x_i)| < \epsilon, i=1, 2, \dots, m$. The title states the results. There are some minor misprints.

J. P. Randolph (Rochester, N. Y.).

Source: Mathematical Reviews,

Vol 12 No. 10

SIERPINSKI, WACLAW: On an Infinity of Continuous Functions, Any Accumulation Function of Which Cannot Be Measured (✓)

SIERPINSKI, WACŁAW

Sierpiński, Wacław. L'hypothèse généralisée du continu
et l'axiome du choix. Fund. Math. 34, 1-5 (1947).

Denote by H_m the hypothesis that, m being any cardinal such that $m \leq \aleph_1$, there is no cardinal n such that $m < n < 2^m$. Denote by H_m this hypothesis for a particular m . A. Lindenbaum and A. Tarski [C. R. Soc. Sci. Varsovie. Cl. III. 19, 299-330 (1926), p. 314] stated without proof that H implies the axiom of choice and that if, for a given m , H_m is true for $p = m, 2^m$ and 2^{2^m} , then m is an aleph. The author establishes the first result and then, by slight modifications of the proof, obtains the second also. J. Todd.

Source: Mathematical Reviews,

Vol. 8 No. 9

Sierpiński, Waclaw

Sierpiński, Waclaw. Sur un théorème de M. Tarski concernant les alephs. Fund. Math. 34, 6-8 (1947).

It was announced without proof by A. Tarski [Lindenbaum and Tarski, C. R. Soc. Sci. Lett. Varsovie. CI. III. 19, 299-300 (1926)] that the equivalence of the following statements can be established without the use of the axiom of choice: (a) m is an aleph, (d) $[m + \aleph(m)] - m = \aleph(m)$. Here $\aleph(m)$ is the smallest aleph \aleph for which the inequality $\aleph \leq m$ does not hold.

The author shows that if Tarski's statement is true, then it can also be proved without using the axiom of choice that the inequality $\aleph \leq m$ holds for every infinite cardinal m . However, since it has been shown by R. Doss [J. Symbolic Logic 10, 13-15 (1945); these Rev. 7, 46] that this inequality cannot be proved without using the axiom of choice, we may conclude that Tarski's theorem is false.

B. Jónsson (Providence, R. I.).

Source: Mathematical Reviews, 1948, Vol 9, No. 1

Sierpinski, Wacław

Sierpiński, Wacław. Sur un ensemble plan qui se décompose en deux ensembles disjoints superposables avec lui. Fund. Math. 34, 9-13 (1947).

Proof, without use of the axiom of choice (multiplicative axiom) of the following theorem. If E is any given set of real numbers in the interval $0 \leq t < 1$, and $0 \in E$, one may effectively define a planar set P , and a decomposition r of P into k disjoint subsets, where k is the cardinal of E , such that every constituent of r is congruent to P (in the Euclidean sense of superposition). A. Lindenbaum announced this result without proof [Lindenbaum and Taraki, C. R. Soc. Sci. Lett. Varsovie. Cl. III. 19, 299-330 (1926), p. 327] as a mere existence theorem, asserting its provability with the aid of the axiom of choice. The proof utilizes the function

$$f(t) = \sum_{n=0}^{\infty} 2^{E_n t} - 2^{E_n}$$

where E_n denotes the largest integer not exceeding n , and a result of von Neumann on the algebraic independence of any finite set of distinct values of $f(t)$, for $t > 0$. By a modification of this argument, the author shows how to define effectively a countable planar set which is the disjoint sum of 2 subsets, each congruent with it, thus solving a problem of Steinhaus. H. Blumberg.

Source: Mathematical Reviews,

1948, Vol 9, No. 1

Sierpinski, Wacław

Sierpiński, Wacław. Deux théorèmes sur les familles de transformations. Fund. Math. 34, 30-33 (1947).

The author proves the following theorem: if M is an infinite set of cardinal number m and F is a family having cardinal number n of functions defined on M (with values in M or not in M), then there exists a family Φ consisting of 2^n subsets of F such that $f(E) \neq H$ for all $E, H \in \Phi$ such that $E \neq H$ and all $f \in F$. The proof does not consider one special case. A second theorem of the same general character is proved.

E. Hewitt (Chicago, Ill.).

Source: Mathematical Reviews, 1948, Vol 9, No. 1

Sierpinski, Wacław

Sierpinski, Wacław. Les correspondances multivoques et l'axiome du choix. Fund. Math. 34, 39-44 (1947).

D. König [Fund. Math. 8, 114-134 (1926)], using the axiom of choice, showed that if an (α, α) correspondence exists between two sets then a $(1, 1)$ correspondence can be set up between these sets in such a way that the correspondent in it of an element is one of its α correspondents in the (α, α) correspondence. It is now shown that a proof of this result in the case $\alpha=2$ which does not appeal to the axiom of choice would imply a proof, without use of this axiom, of the existence of a set not measurable-L. It is shown that the special case $\alpha=2$ of König's result is a consequence of the special case of the axiom of choice concerned with selection from classes of couples. *J. Todd.*

Source: Mathematical Review.

Vol. 8 No. 10

Sierpinski, Wacław

Sierpiński, Wacław. Sur un problème concernant le crible
de M. Eusn. Fund. Math. 34, 69-71 (1947).

A sieve can be regarded as a function $E(r)$ associating a set $E(r)$ with each rational r . Its nucleus is the set $K_r(E(r)) = \sum \prod_i E(r_i)$, where the summation is over all decreasing sequences $\{r_i\}$. Consider $E(u, v)$, a function associating a set $E(u, v)$ with each pair of rationals u, v . Write $E(u) = K_r(E(u, v))$, $E = K_r(E(u))$. Kuratowski suggested the problem: do there exist functions $\phi(r)$, $\psi(r)$, associating rationals with the rational r , such that if $E(r) = E(\phi(r), \psi(r))$ then $E = K_r(E(r))$? It is shown that the answer is in the negative.

Denote by $K(\Phi)$ the class of all sets $K_r(E(r))$ where the $E(r)$ are sets of a class Φ . It is known that $KK(\Phi) = K(\Phi)$ whenever Φ is a (finitely) multiplicative class. This result is not, however, true for arbitrary classes. J. Todd.

Source: Mathematical Reviews,

Vol. 8 No. 10.

SIERPINSKI, WACŁAW

Sierpiński, Waclaw. Un théorème sur les puissances des ensembles. *Fund. Math.* 34, 72-74 (1947).

The following theorem is established without appeal to the axiom of choice: if M is a class with cardinal m and N a subclass with cardinal n and if p satisfies $m \geq p \geq n$ then there exists a class P with cardinal p and such that $M \supset P \supset N$.
J. Todd (London).

Source: Mathematical Reviews,

Vol. 8 No. 10

SIERPINSKI, WACŁAW

Sierpiński, Wacław. Démonstration de l'égalité
 ~~$2^m = 2^n$~~ pour les nombres cardinaux transfinis.
 Fund. Math. 34, 113-118 (1947).

Sierpiński, Wacław. Sur la différence de deux nombres
 cardinaux. Fund. Math. 34, 119-126 (1947).

If m and n are two cardinals and if there exists a unique
 cardinal p such that $m = n + p$, then one writes $p = m - n$.
 The author proves without the use of the axiom of choice
 various theorems concerning the subtraction of cardinals.
 The above definition is due to A. Tarski who has also
 announced, without proofs, most of the theorems proved
 by the author [Lindenbaum and Tarski, C. R. Soc. Sci.
 Lett. Varsovie. Cl. III. 19, 299-330 (1926)].

B. Jónsson (Providence, R. I.).

Source: Mathematical Reviews,

Vol 7 No. 7

SIERPINSKI, WACLAW

Sierpiński, Wacław. Sur les images de classe 1 d'ensembles linéaires. Fund. Math. 34, 163-165 (1947).

Let $f(x)$ be a real function of Baire class α on a linear set X . The set $f(X)$ is called an "image of class α " of X . The author proves that every image of class 2 of X is an image of class 1 of an image of class 1 of X . This theorem can be generalized to images of class n (finite), which can be represented as n -fold superposed images of class 1.

A. Rosenthal (Lafayette, Ind.).

Source: Mathematical Reviews, 1948, Vol 9, No. 4

8m/222

SIERPINSKI, WACLAW

Sierpinski, Wacław. Sur l'implication $(2m \leq 2n) \rightarrow (m \leq n)$
pour les nombres cardinaux. Fund. Math. 34, 148-154
(1947).

The author proves, without using the axiom of choice,
that if m and n are two cardinals such that $2m \leq 2n$, then
 $m \leq n$. This theorem was announced without proof by A.
Tarski [Lindenbaum and Tarski, C. R. Soc. Sci. Lett.
Varsovie. Cl. III. 19, 299-330 (1926)]. B. Jónsson.

Source: Mathematics Reviews;

Vol 9 No. 7

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Sierpiński, Wacław. Sur l'inversion du théorème de Bolzano-Weierstrass généralisé. Fund. Math. 34, 155-156 (1947).

Let M be any metric space. A sequence $\{A_n\}_{n=1}^{\infty}$ of subsets of M is said to be convergent if, for every $p \in M$ and for every open sphere S with center p , $S \cap A_n = \emptyset$ for almost all n or $S \cap A_n \neq \emptyset$ for almost all n . The author proves that, if $2^{\aleph_1} = \aleph_2$, then every nonseparable metric space contains a sequence of subsets which has no convergent subsequence.

E. Hewitt (Chicago, Ill.).

Source: Mathematical Reviews, 1948, Vol 9, No. 2

Small

Sierpinski, Wacław

Sierpiński, Wacław. Sur une proposition qui entraîne l'existence des ensembles non mesurables. Fund. Math. 34, 157-162 (1947).

The main concern of the author is to obtain certain known results without the use of the axiom of choice. He starts with proposition P : A "one-valued" image B of a set A (i.e., each element of A has a unique mate in B) is not of higher cardinal than A . On the basis of P , he proves successively, without resort to the axiom of choice, that: (1) $\aleph_1 \leq 2^{\aleph_0}$; (2) if 2^{\aleph_0} is the sum of 2 cardinals, at least one of them equals 2^{\aleph_0} ; (3) there exists a linear nondenumerable set containing no (nonnull) perfect set; (4) there exists a linear (Lebesgue) nonmeasurable set. The reasoning utilizes Lebesgue's decomposition of an interval into \aleph_1 (nonnull) disjoint sets [J. Math. Pures Appl. (6) 1, 139-216 (1905), p. 213]; and the author's result [Mathematica, Cluj 3, 30-32 (1930)] that if we can determine a linear order for the "Vitali classes" V (of real numbers), then we can define a (Lebesgue) nonmeasurable set; here V is a set consisting of all the real numbers which differ from a fixed real number by a rational amount. It is additionally shown that the axiom of choice is equivalent to the following proposition: of two sets, at least one is a one-valued image of the other. H. Blumberg (Columbus, Ohio).

Source: Mathematical Reviews,

Vol 9 No. 7

Samuel *Blumberg*

SIERPINSKI, W.

Author: Sierpinski, W.

Title: Textbook of Introductory Elementary Functions.
267 pp.

Date: 1948. Warsaw

Subject: 1. Functions. 2. Calculus, differential

Available: Library of Congress, Call No: QA303.S57 1923a
Brown University Library.

Source: Lib. of Cong. Subj. Cat., 1950, vol. 2

SIERPIŃSKI, W.

Sierpiński, W. Remarque sur la répartition des nombres premiers. Colloquium Math. 1, 193-194 (1948).

This note contains a proof of the following theorem: to each integer n there corresponds a prime $p > n$ such that not one of the integers $p \pm j$, $j = 1, 2, \dots, n$, is a prime. The proof is simple, but uses the Dirichlet theorem about primes in an arithmetic progression. The author remarks that it would be interesting to discover an elementary proof of his result. Now that there are elementary proofs of the Dirichlet theorem his proof is technically elementary, but it would still be interesting to obtain a direct elementary proof.

R. D. James (Vancouver, B. C.).

Sumner

Source: Mathematical Reviews,

Vol 10 No. 7

SIERPIŃSKI, W.

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Sierpiński, W. Sur une propriété de la droite qui résulte de l'hypothèse du continu. *Mathematica, Timișoara* 23, 52-53 (1948).

Proof by means of the continuum hypothesis, of the theorem that a straight line L is the sum of 2^{\aleph_1} disjoint sets E , each congruent to L by denumerable decomposition; i.e., L and each E are decomposable into \aleph_1 disjoint components: $L = \sum_{\alpha=1}^{\aleph_1} L_{\alpha}$, $E = \sum_{\alpha=1}^{\aleph_1} E_{\alpha}$, such that, for every α , L_{α} is congruent to E_{α} (in the sense of superposability). The argument uses a result of Banach and Tarski [*Fund. Math.* 6, 244-277 (1924)]. A corollary is the validity, under the continuum hypothesis, of a like result when L is an n -dimensional Euclidean space, $n > 1$. For $n \geq 3$, this result holds (as proved in an earlier paper of the author by a lengthier argument [*Fund. Math.* 33, 235-244 (1945); *these Rev.* 8, 140]) without recourse to the continuum hypothesis, congruence being taken in the sense of finite decomposition.

H. Blumberg (Columbus, Ohio).

Source: *Mathematical Reviews*,

Vol 10 No. 2

Image

STERPIŃSKI, W.

Sierpiński, W. Sur quelques propriétés du nombre 2^{\aleph_1} .
Mathematica, Timişoara 23, 60-64 (1948).

The author proves without using the axiom of choice various theorems from the arithmetic of cardinal numbers (e.g., if m is a nonfinite cardinal, then $m \leq 2^m$ implies $2^m \leq 2^m$). These theorems were announced, without proofs, by A. Tarski [Lindenbaum and Tarski, C. R. Soc. Sci. Lett. Varsovie. Cl. III. 19, 29-330 (1926)], but the following lemma, which is used in the proofs, is new. Any nonfinite set of real numbers can be constructively decomposed into an infinite sequence of nonempty disjoint subsets.

B. Jónsson (Providence, R. I.).

Source: Mathematical Reviews.

Vol 10 No. 5

SIERPIŃSKI, W.

Sierpiński, W. Sur un problème concernant les espaces métriques. *Mathematika*, 23, 65-69 (1948).

All spaces are metric. A space E contains a model of a space M if there is a one-to-one mapping f of M into E such that $r_E(f(p), f(q)) = kr_M(p, q)$ for all $p, q \in M$. If $k=1$ and $f(M)=E$, E and M are isometric. If $\epsilon > 0$, $f(M)=E$ and $|r_E(f(p), f(q)) - r_M(p, q)| < \epsilon$ for all $p, q \in M$, E and M differ by less than ϵ . In connection with the problem, ascribed to Borsuk, of the existence of a semi-compact E ($E = \sum E_n$, E_n compact) containing, for every compact M , an isometric E_M , the author proves the following results. (1) There is no compact space which contains a model of every denumerable space. (2) There is a compact space which contains a model of every finite space. (3) There is a semi-compact space which contains, for every finite space M , an isometric E_M . (4) For every space E and for every $\epsilon > 0$ there is a space H with rational distances which differs from E by less than ϵ . (5) There is a denumerable space H_ϵ with rational distances which, for all denumerable spaces E and all $\epsilon > 0$, contains a space H_ϵ differing from E by less than ϵ . [cf. P. Urysohn, *Bull. Sci. Math.* (2) 51, 43-64, 74-90 (1927)].

L. W. Cohen (Flushing, N. Y.).

Source: Mathematical Reviews,

Vol. 10, No. 1

Sierpiński, Wacław

Sierpiński, Wacław. Sur la division des types ordinaux.
Fund. Math. 35, 1-12 (1948).

Among the results established here are the two following (which were stated without proof by A. Lindenbaum and A. Tarski [C. R. Soc. Sci. Lett. Varsovie. Cl. III. 19, 299-330 (1926), 321]. Let α and β be two order types. (1) If $\mu \cdot \alpha = \mu \cdot \beta$ for some ordinal number $\mu \neq 0$ then $\alpha = \beta$. (2) If $\alpha \cdot \kappa = \beta \cdot \kappa$ for some integer κ then $\alpha = \beta$. It is noted that (1) is no longer true when μ is an order type, e.g., if η is the order type of the rational numbers in natural order, for $\eta \cdot 2 = \eta \cdot 1$. It is noted that (2) remains true when κ is replaced by ω (nonlimiting transfinite ordinal) but that it is false, e.g., when κ is replaced by ω since $1 \cdot \omega = 2 \cdot \omega$.
J. Todd (London).

Source: Mathematical Reviews.

Vol 10 No. 6

SIERPINSKI, WACLAW: About Sets That Are Quasi Continuous in One Another

Sierpiński, Wacław. Sur les ensembles presque contenus les uns dans les autres. Fund. Math. 35, 141-150 (1948).

In extension of the terminology used in the above review let $A \leq B$ mean that the set $A - B$ is finite, and let $A \approx B$ mean that $A \leq B$ and $B \leq A$. Define a pair of families of sets \mathfrak{A} and \mathfrak{B} , the family \mathfrak{A} having power a and the family \mathfrak{B} having power b , to be in a, b (cardinal) gap if $A \leq B$ for all $A \in \mathfrak{A}, B \in \mathfrak{B}$ and if for no set X is $A \leq X \leq B$ for all $A \in \mathfrak{A}, B \in \mathfrak{B}$. It is known that no \aleph_1, \aleph_1 gaps exist and that \aleph_1, \aleph_1 gaps do exist. It is shown that $2^{\aleph_1}, \aleph_2$ gaps in \mathfrak{A} exist, so that under the continuum hypothesis \aleph_1, \aleph_2 gaps in \mathfrak{A} exist. It is also shown with the aid of the continuum hypothesis that \aleph_1, ω (ordinal) gaps and \aleph_1, \aleph_1 limits exist. Finally, again using the continuum hypothesis, an \mathfrak{A} -set Y and a pair of transfinite sequences of \mathfrak{A} -sets A_μ ($\mu < \Omega$) and B_μ ($\mu < \Omega$) are constructed with $A_\mu < A_\nu$, $Y < B_\mu < B_\nu$ for all $\mu < \nu < \Omega$ such that $X \approx Y$ for any set X having the property that $A_\mu < X < B_\mu$ for all $\mu < \Omega$.

W. Gustin (Bloomington, Ind.).

Source: Mathematical Reviews,

Vol. 10, No. 10

SIERPINSKI, WACLAW

Sierpinski, Wacław. Sur l'équivalence des ensembles par décomposition en deux parties. Fund. Math. 35, 151-158 (1948).

Two sets A and B in a Euclidean space are equivalent by decomposition into n parts (notation, $A \sim_n B$) if they admit decompositions into disjoint components: $A = A_1 + \dots + A_n$, $B = B_1 + \dots + B_n$, with A_i and B_i , $i = 1, \dots, n$, congruent, i.e., superposable by translation or rotation. The sets A and B are equivalent by finite decomposition if there exists a positive integer n such that $A \sim_n B$. Among other results, the author proves that, if K is the linear continuum, and B any bounded or denumerable set, then $K \sim_2 K - B$. If R and A , respectively, are the sets of rational and of algebraic numbers, then R and A are not equivalent by finite decomposition; nor are R and D so equivalent, where D is the set of finite decimal fractions. It is finally proved, with the aid of a result of Hausdorff, that the surface S of a sphere is decomposable into 10 disjoint parts of which four and six yield respectively, upon suitable translations and rotations, two spherical surfaces each congruent to S . This result connects with one due to R. M. Robinson [Fund. Math. 34, 246-260 (1947), in particular, p. 254; these Reviews, 10, 106]. Most of the proofs are elementary and brief. H. Blumberg (Columbus, Ohio).

Source: Mathematical Reviews.

Vol.

10 No. 7

SIERPIŃSKI, W.

Sierpiński, Wacław. Sur la translation des ensembles finies. Fund. Math. 35: 157-164 (1948).

If E is a set of real numbers, its translation by a is the set of $x+a$ for all x in E . How many distinct translations does a given set have? (Distinct translations might overlap.) If $N(E)$ is the number of distinct translations, then $N(E)$ is infinite unless E is empty or the set of all real numbers, and for every cardinal m with $\aleph_0 \leq m \leq 2^{\aleph_0}$ there are sets E for which $N(E) = m$. If $N(E) = \aleph_0$ then E is non-measurable, has the property (*): the outer measure of E in every interval is the length of the interval. Every E which is not a null-set and for which $N(E) \leq 2^{\aleph_0}$ has this property (*). L. Halperin (Kingston, Ont.).

Source: Mathematical Reviews.

Vol 10 No 2

21

Sierpinski, Wacław

Sierpinski, Wacław. Sur un problème de la théorie générale des ensembles équivalent au problème de Jouaquin. *Funct. Math.* 35, 165-174 (1948).

The problem in question is whether a class F satisfying the three following conditions is necessarily countable. (1) If $X \in F$, $Y \in F$ then either $X \subset Y$, $X \supset Y$ or $XY = 0$. (2) If $F_1 \subset F$ and if $X \in F_1$, $Y \in F_1$ imply $XY = 0$ then F_1 is at most countable. (3) If $F_1 \subset F$ and if $X \in F_1$, $Y \in F_1$ imply either $X \subset Y$ or $X \supset Y$ then F_1 is at most countable and contains a maximal element. The author points out, in a footnote added in proof, that D. Maharam [*Bull. Amer. Math. Soc.* 54, 58-590 (1948); these *Rev.* 9, 573] has noted that the condition (3) can be replaced by (4) if $F_1 \subset F$ and if $0 \neq X \in F_1$, $0 \neq Y \in F_1$ imply $XY \neq 0$ then F_1 is at most countable. Condition (2) and (4) are weaker than (2) and (3).

J. Todd (London).

Source: Mathematical Reviews,

Vol. 10 No. 6

Sierpinski, Wacław

Sierpinski, Wacław. Sur l'analyticité de l'espace D_α au sens de M. Menger. Fund. Math. 35, 208-212 (1948).

K. Menger [Jber. Deutsch. Math. Verein. 37, 213-226 (1928)] called a separable metric space M analytic if it could be represented in the form $M = \sum \prod A(n_1, n_2, \dots, n_k)$ where the product is over $k=1, 2, \dots$, where the summation is over all infinite sequences (n_1, n_2, \dots) of integers, and where the sets A are closed in M and such that (*) each product $\prod A$ reduces to a single point (provided no set A is empty). The author now defines, in the nonseparable set D_α [M. Fréchet, Les Espaces Abstraits, Gauthier-Villars, Paris, 1928, p. 97], a system of closed sets $\{A(n_1, n_2, \dots, n_k)\}$ which have the property (*) and for which $D_\alpha = \sum \prod A$.

J. Todd (London).

Source: Mathematical Reviews,

Vol 10 No. 6

Wacław Sierpiński, Wacław

Sierpiński, Wacław. Exemple effectif d'une famille de
ensembles linéaires croissants. Fund. Math. 35,
213-216 (1948).

The object of this note is to define effectively a family P of c ($=2^{\aleph_0}$) linear, increasing sets (i.e., such that each of these sets is a sub- or superset of each of the others). The chief aid is the following lemma, whose proof is a modification of an idea of Lebesgue [J. Math. Pures Appl. (6) 1, 139-216 (1905), in particular, p. 213]. One can effectively define a function $f(D)$ which mates with each enumerable set D of ordinals greater than ω and less than Ω a linear, nonnull set $f(D)$ such that $f(D)$ and $f(D')$ are disjoint whenever D and D' are distinct. The proof proceeds by considering the infinite sequence r_1, r_2, \dots of all rationals, and representing an irrational x , $0 < x < 1$, by the continued fraction

$$x = \frac{1}{r(1, x) + \frac{1}{r(2, x) + \dots}}$$

where the r 's are uniquely determined positive integers. If u_1, u_2, \dots is an infinite sequence of distinct rationals,

Source: Mathematical Reviews.

$\varphi(u_1, u_2, \dots)$ denotes the order type of the u_n when arranged according to magnitude. If, now, D is a denumerable set of ordinals greater than ω and less than Ω , $f(D)$ is defined as the set of all the irrationals x , $0 < x < 1$, such that the set of order types

$$\varphi(r_1, \alpha - 1, \omega), \varphi(r_2, \alpha - 1, \omega), \varphi(r_3, \alpha - 1, \omega), \dots$$

with $k = 1, 2, \dots$, is identical with D except permissibly for the order of its terms. It follows at once from the result of this note, by the adjunction of the continuum hypothesis [as was proved in a different manner by the author in his Hypothèse du Continu, Warsaw, 1934, p. 120] that the continuum is the sum of c increasing sets.

H. Blumberg (Columbus, Ohio).

LFH

J. M. W.

Vol 10, No. 10

SIERPINSKI, WACŁAW

Sierpiński, Wacław. Remarques sur deux axiomatiques des espaces abstraits. Soc. Sci. Lett. Varsovie. C. R. Cl. III. Sci. Math. Phys. 40 (1947), 46-49 (1948). (French. Polish summary)

This paper shows that from the topological point of view the study of the "gestufter Raum" of Hausdorff [cf. Fund. Math. 25, 486-502 (1935), p. 489] is equivalent to the study of the (U) space of Fréchet [cf. Les espaces abstraits . . . , Gauthier-Villars, Paris 1928, p. 277] satisfying the additional condition (C): If V_1 and V_2 are neighborhoods of a then there is another neighborhood V of a such that $V \subset V_1 \cap V_2$. ("x is a point of accumulation of X" is defined to mean "every neighborhood of x contains infinitely many points of X"). It is shown that if one begins with a (U) space satisfying (C), and lets X' be the set of points of accumulation of X, then $X \rightarrow X_1 = X + X'$ defines a "gestufter Raum". It is also proved that if one begins with a "gestufter Raum", then " V is a neighborhood of a " means " $a \in (E - V)_1$ " defines a (U) space satisfying (C); and from the (U) space so obtained, $X + X'$ is the same as X_1 of the "gestufter Raum".

H. Tong (Paris).

Source: Mathematical Reviews,

Vol 12 No. 7

Samuel

Sierpiński, Wacław

Sierpiński, Wacław. Sur les relations entre quelques propriétés fondamentales des espaces topologiques. Soc.

Sci. Lett. Varsovie. C. R. Cl. III. Sci. Math. Phys. 40 (1947), 66-78 (1948). (French. Polish summary)

Let S be a T_1 space. The author studies relations among the following properties concerning S . (H): S is a Hausdorff space; (A): S satisfies the first axiom of countability; (B): S possesses a denumerable base; (C): no infinite sequence can sequentially converge to two distinct limits; (D): S is a denumerable set. It is shown that $A \cdot D \rightarrow B$ and $A \cdot C \rightarrow H$. He then shows the existence or nonexistence (by examples or easy deduction) from the relations given in the preceding sentence and the facts that $B \rightarrow A$ and $H \rightarrow C$ of T_1 spaces having the above properties (or negations) conjointly. All the thirty-two possibilities are studied. If G is the property that ECS and $a \in E(a)$ implies a is the sequential limit of a sequence of elements different from a , then clearly $A \rightarrow G$. An example of a denumerable Hausdorff space which does not enjoy G is given.

H. Tong (Paris).

Source: Mathematical Reviews.

Vol 12, No. 3

SIERPINSKI, W.

Math. Sierpinski, W. Remarques sur la décomposition des nombres en sommes des carrés de nombres impairs. Colloquium Math. 2, 52-55 (1949).

The author notes the equivalence of the two theorems: (A) Every integer of the form $8k+3$ is the sum of three squares, and (B) every integer is the sum of at most 10 odd squares, due respectively to Gauss and Turski. If one seeks to base a proof of either (A) or (B) on Lagrange's theorem, (C) every integer is the sum of four squares, using only very elementary reasoning one can prove: (D) Every integer is the sum of at most 11 odd squares. D. H. Lehmer.

Source: Mathematical Reviews,

Vol. 12 No. 7

SIERPINSKI, W.: Remarks on the Decomposition of Numbers into Sums of the Squares of Odd Numbers

Spence

Slurpids, Wacław. Sur les ensembles linéaires dénom-
brables. Pour l'équivalence par décomposition finie. Fund.
Math. 36, 1-6 (1949).

Two linear sets A and B are equivalent by finite decom-
position (in notation, $A \sim_f B$) if there exist a positive integer
 n , and decompositions $A = A_1 + \dots + A_n$, $B = B_1 + \dots + B_n$
into disjoint sets, such that A_i and B_i , $i = 1, \dots, n$, are
superposable (by translation or rotation). Among other
results are the following. (I) If E is a linear infinite set,
there exists a subset H of E such that $E \not\sim_f H$ (i.e., $E \sim_f H$
is false). The proof, which is brief and simple, distinguishes
the two cases, (1) E bounded, (2) E unbounded; the reason-
ing, however, is similar, proceeding by inductive definition
of H as an infinite sequence by means of the distances of
point pairs of E . (II) If E_1, E_2, \dots is an infinite sequence of
infinite linear sets such that, for every n , $E_{n+1} \sim_f$ a sub-
set of E_n , then there exists an infinite set E such that,
for every n , $E \sim_f$ a subset of E_n but $E \not\sim_f E_n$. The proof
is inductive, and depends on (I). (III) If A is a bounded
set of rational numbers, there is no proper subset B of A
such that $B \sim_f A$. (IV) There exists a family of $c(=2^{\aleph_0})$
sets of positive integers such that no pair of them are equiv-
alent by finite decomposition.

H. Blumberg.

Source: Mathematical Reviews.

Vol 11 No. 3

Sierpiński, Wacław

Sierpiński, Wacław. Sur un problème de M. Lusin concernant les fonctions additives analytiques. Fund. Math. 36, 44-47 (1949).

A family of sets Φ is said to have the property π_s (s being finite or \aleph_1) if, for any sequence of sets E_s ($s=1, 2, \dots, s$) chosen arbitrarily from Φ , there exists a sequence of sets H_s of Φ for which we have $\bigcap_{s=1}^{\infty} H_s = \emptyset$ and $E_s \subset \bigcup_{i=1}^{\infty} H_i$ ($s=1, 2, \dots$). First the author proves the following main theorem: If Φ is additive and satisfies π_s ($s=1, 2, \dots$) (in the sense) and has π_s , then it has also π_s for $s=3, 4, \dots$. This result shows, in particular, that the family \mathcal{F}_s of elementary analytic sets [this is an affirmative solution for a problem proposed by N. Lusin (C. R. (Doklady) Acad. Sci. URSS (N.S.) 3 (1934-II), 280-284)] or of sets $PC(A)$ (in a complete separable space), and \mathcal{F}_s of Borel sets of additive class α ($\alpha > 0$) (in a metric space) have π_s for $s=2, 3, 4, \dots$. Then the author gives an example which shows that we cannot extend the above theorem to the case $s=\aleph_1$. The problem of whether the family \mathcal{F}_1 or \mathcal{F}_2 has π_{\aleph_1} is left open. Finally the author shows by an example that there exist three analytic sets E_1, E_2, E_3 for which no Borel sets Q_1, Q_2, Q_3 have the property: $E_1 \subset Q_1, E_2 \subset Q_2, E_3 \subset Q_3$ ($s=1, 2, 3$) and $Q_1 \cap Q_2 \cap Q_3 = \emptyset$, which answers negatively another problem of N. Lusin [loc. cit.].

K. Kąkol (Osaka).

Source: Mathematical Reviews,

Vol 11 No. 9

SIERPIŃSKI, WACŁAW

Sierpiński, Wacław. Sur les familles croissantes d'ensembles fermés. Fund. Math. 36, 48-50 (1949).

Let Φ be a family of subsets of a (not necessarily separable) metric space, such that, whenever $E_1, E_2 \in \Phi$, either $E_1 \subset E_2$ or $E_2 \subset E_1$. The author shows very simply that if the sets of Φ are either all closed, or all scattered (clairsemé), their union S is either the union of countably many sets of Φ , or is itself closed or scattered, respectively. Thus, in all these cases, S is an F_σ set. Further, if the sets of Φ are closed and form an increasing transfinite sequence $\{E_\alpha\}$, then $\bigcup (E_{\alpha+1} - E_\alpha)$ is F_σ .

A. H. Stone (Manchester).

SMW
HSH

Source: Mathematical Reviews.

Vol 11, No. 3

SIERPIŃSKI, WACLAW

Sierpiński, Wacław. Sur l'opération $\lim_{x \rightarrow \infty} \Phi(x, y)$. Fund.
Math. 36, 51-55 (1949).

This note supplies proofs for theorems previously announced by the author [Pont. Acad. Sci. Acta 4, 203-204 (1940); these Rev. 2, 256]. It is shown that there exist $\Phi(x, y, z)$ of Baire class 1 such that the statement " $f(x) = \liminf_{x \rightarrow \infty} \limsup_{y \rightarrow \infty} \Phi(x, y, z)$ is measurable" is not decidable.

L. W. Cohen (Flushing, N. Y.).

Smul

Source: Mathematical Reviews,

Vol. 11 No. 4

SIERPIŃSKI, WACŁAW

Sierpiński, Wacław. Sur une propriété des ensembles transfinis. Fund. Math. 36, 56-67 (1949).

Let θ be any transfinite ordinal and let U_θ be the class of transfinite sequences of type θ formed by the numbers 0 and 1, ordered lexicographically. The author improves a result of Hausdorff [Gründzüge der Mengenlehre, Veit, Leipzig, 1914, pp. 181-182] by showing that (I) every ordered set of power \aleph_μ (where μ is any ordinal) is similar to a subclass of U_μ ; (II) the number ω_μ in (I) cannot be replaced by a smaller ordinal. (Hausdorff had shown (I) for sequences formed from the numbers 0, 1, 2.) In the course of the proof it is shown (i) that a class U_θ has no gaps, i.e., whenever U_θ is cut into 2 classes A and B such that every sequence of A precedes every sequence of B , then either A has a last element or B has a first element; (ii) that U_θ contains no well-ordered subclass of power greater than θ . If by a class of type μ we mean an ordered class which is neither co-initial nor co-final with any subclass of power less than μ and contains no transfinite sequences of power less than \aleph_μ , the remaining results of the paper can be stated as follows. (III) If μ is an ordinal of the first kind and $\mu = \mu' + 1$, then U_μ has an ordered subclass E of power $2^{\aleph_{\mu'}}$ such that for any ordered class of power $\aleph_{\mu'}$ there exists a subclass of E which is similar to it. (IV) If μ is any non-negative ordinal, there is a class of type $\mu+1$ with power 2^{\aleph_μ} . (V) Every class of type $\mu+1$ has power at least 2^{\aleph_μ} ($\mu \geq 0$). (VI) The least possible power of a class of type $\mu+1$ is 2^{\aleph_μ} .

J. L. Neuman (Wellesley, Mass.)

Source: Mathematical Reviews.

101 11 8 3

Sierpiński, Wacław

Sierpiński, Wacław. Sur la décomposition des espaces métriques en ensembles disjoints. Fund. Math. 36, 68-71 (1949).

Let M be a metric space such that every (nonempty) open set in M contains at least $m \geq \aleph_0$ points. Then M is the sum of m disjoint sets each of which contains at least m points of each open subset of M . This is the solution, for the metric case, of the problem of "determining the largest number of disjoint dense subsets possible in a resolvable space," proposed by E. Hewitt [Duke Math. J. 10, 309-333 (1943); these Rev. 5, 46; a space is resolvable if it is the sum of two disjoint dense sets]. For $m = \aleph_0$, it reduces to the statement that every metric space M which is dense in itself is the sum of an infinite sequence of disjoint dense sets. A set is condensed if each of its open subsets is uncountable. The theorem given above implies that every condensed metric space is a sum of uncountably many disjoint condensed sets each of which is dense in the space.

E. E. Moise (Princeton, N. J.).

Source: Mathematical Reviews. 1970 Vol 11 No. 2

SIERPINSKI, W.

Sierpiński, W., and Singh, A. N. On derivatives of discontinuous functions. Fund. Math. 36, 283-287 (1949).

The authors prove the following results. (i) There exists a function $f(x)$, continuous on the right but discontinuous at an everywhere dense set, such that everywhere the lower right derivate of $f(x)$ is zero. (The construction depends on the expression of x in the scale of 3 defined in terms of the expression of x in the scale of 2.) (ii) If a function has a finite right hand differential coefficient everywhere, the discontinuities of the function form a nondense set. The use of the symbol $f'_+(x)$ to denote both the lower right derivate and also (in the latter part of the paper) the right hand differential coefficient may cause some trouble to the reader.

U. S. Haslam-Jones (Oxford).

Source: Mathematical Reviews,

Vol 12, No. 2 .

Small